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# **BOWLING**

## **DIGEST**

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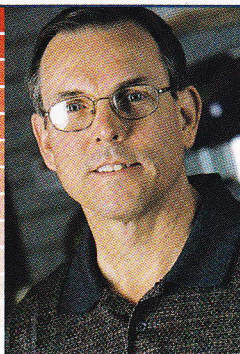
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# Walk Straight, and the Results Are Great

By **BILL SPIGNER**

■ *In the June 2002 issue of **BOWLING DIGEST**, Jeri Edwards and John Jowdy talked about alignment. I am confused. Let's say the target is the 2nd arrow and the bowler is standing on the 20th board or middle dot. Should the bowler walk toward the 2nd arrow or in a straight line toward the headpin?*

There are three ways to walk toward the foul line: straight, left, or right. For a right-handed bowler, straight is great, left is right, and right is wrong.

Walking **straight** is good for the down-and-in players. These types of players keep the ball traveling parallel to the boards of the lane. They use a straight swing and keep the fingers directly behind the ball

during the swing, with very little hand and shoulder rotation.

Players who initiate a lot of hand action walk **left** (right for a lefthander). This allows them to get out of the way of their swing. Most of the high-torque players rotate their shoulders, and their hand opens during the approach. This action puts the weight of the ball on the outside of the hand, which naturally pushes the swing inside on the backswing; they have to walk out of the way of their swing so the ball doesn't get trapped behind them.

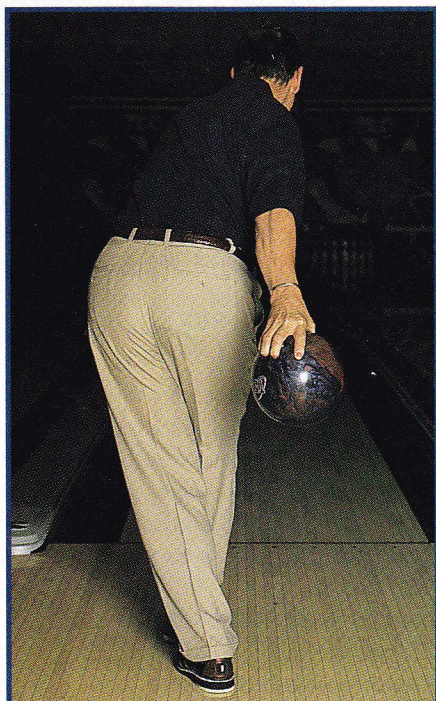
On the forward swing, the shoulders will square up to the line the bowler wants the ball to travel. The hand squares up because the shoulders are squaring up. The shoulders

actually rotate the hand and, with the ball and swing traveling on an inside-out path, help produce the strong release.

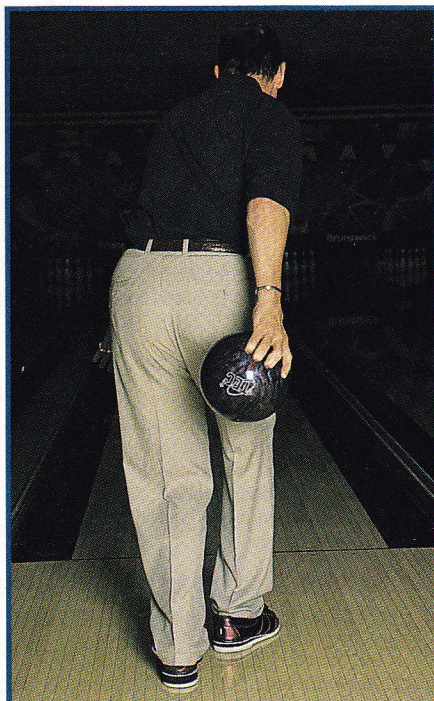
Walking to the **right** (left for a lefthander) as a normal walk pattern is not correct. There are still some instructors who believe you should walk in the direction you want the ball to go. In the old days of hard rubber balls and wood surfaces with a ball track in the lane, this was an effective way to play.

But today we bowl on smooth surfaces and on oil. The lane doesn't have a ball track you have to stay in. Today's balls create a track in the oil, and that track moves a lot during play. This makes it very important for a right-handed bowler to be

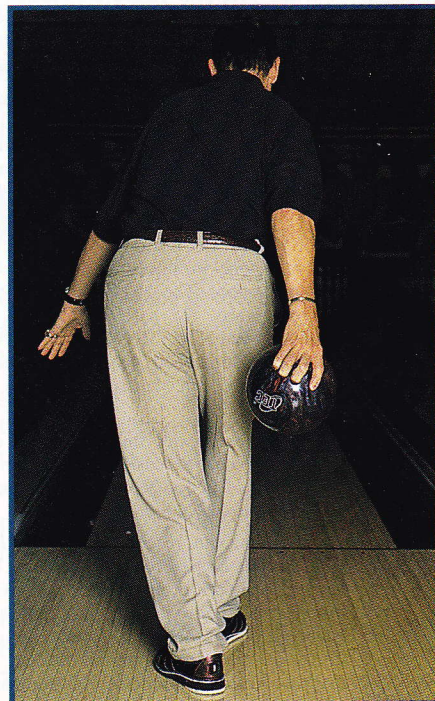
**Of the three approaches a righthander can take, only one leads to trouble. Walking left is best if you have a lot of hand action, and walking straight works well for down-and-in rollers. But walking right doesn't work with today's balls and lanes.**



**LEFT**



**RIGHT**



**STRAIGHT**

able to move left as that track in the oil is moving left. If you walk right, you can't keep up with the lane condition as it changes.

The real key to playing lanes is having your shoulders face the direction you want the ball to travel and making your arm travel in that direction. The arm needs to be able to swing unrestricted in the desired direction from the top of the swing through the finish.

If you have to change the direction the ball has to travel on the downswing, there is very little chance for consistency; you will always be trying to compensate for the problem. Sometimes when the stars are all aligned and the moon is in the right place, you will have a good night. Generally, though, if the swing is trapped behind you, you're in for big trouble. One of the big problems with walking right is that the swing gets trapped behind you and has to be realigned on the downswing.

Straight and left are good directions for a right-handed bowler to walk. The worst thing you can do for consistency is get the swing trapped behind you by walking right. If you bowl in one house, on one condition, you can get away with walking right. But if you want to get better and compete on a variety of conditions, you have to be able to adjust your walk and swing direction. There may be an occasion to walk right, but it won't arise nearly as often as walking left. This makes it essential for a righthander to learn to walk left.

■ **How can you measure the axis tilt or determine if it is 45 or 90 degrees? Also, if you have a 45-degree axis tilt, where is the track located: close to the thumb, two inches away...where?**

Many bowlers confuse axis tilt with axis rotation. **Axis rotation** is determined by the amount of side roll that your turn applies to the ball. **Axis tilt** is the spin that you put on the ball. Tilt increases as the circumference of the ball track lessens—there's more tilt with a spinner and less tilt with a high track.

To determine the tilt of your axis, you must find the axis of the ball's rotation. Throw a few balls on the oiliest part of the



**To determine your ball's axis of rotation, first trace the oil track of the ball. From there, use a soft ruler to mark the halfway point from the two sides of the oil track [above].**

lane so you have an oil track all the way around the ball. Take a grease pencil and trace that oil track all the way around the ball. You want to use the track that is the closest to the finger and thumb holes. That's your track for the initial rotation of the ball on the lane (most of today's ball flare finds the track and axis changing as the ball rolls down the lane).

Once you have marked the initial rotation/track of the ball, place the ball in a small ashtray on a table. Rotate the ball until the track is horizontal to the table. Now take a flexible measuring tape and measure the distance from the track on one side of the ball over the top to the track on the other side of the ball. Use a grease pencil to mark the point on the top of the ball that is half the distance from the two sides of the track. Now rotate the ball a quarter-turn while keeping the track horizontal, and repeat the measuring process. Mark the point that these two lines intersect with a piece of tape or a round dot. This is the axis point of your ball's rotation.

The tilt of the axis is determined by the track of the ball. If the track of the ball

covers 27 inches, which is the full circumference of the ball, there would be no tilt. This type of roll is normally a complete straight ball that rolls right over the middle of the finger holes and thumb hole. A semi-roller track covers less of the circumference of the ball and will have some tilt. The spinner track will have the most tilt.

If the track covers the full circumference of the ball and has zero degrees tilt, how do we determine how much tilt the other tracks have? The easiest way to measure the tilt of the axis is by, again, marking the first track around the ball. Find your axis point and mark it. Next, put the ball in a small ashtray on a table and rotate the ball so the bottom of the track is in the middle of the bottom of the ball on the table. Then rotate the ball until the track is facing you, so you can see the bottom and top of the track in front of you. Then mark a line around the ball that is right in the middle of the ball. From this line, you can measure the distance from the line to the axis to see how far the axis is from the center of the ball. Every  $1\frac{1}{8}$  inches the axis tracer is above the center line represents 15 degrees of tilt.



Oil tracks are marked on a pancake-block low-flaring core [left], a two-piece low-flaring core [center], and a multipiece high-flaring core.

■ **Most of the balls I am using track three inches down from the thumb hole. This does not concern me, but the track stays left of center on the bottom of the ball, and it makes me feel like I am spinning the ball. To satisfy my own mind, I have a Blue Storm Flame drilled with the pin in the center of the fingers, with little finger weight and no side weight. When I throw this ball, the track is only 1½ inches from the thumb, and on the bottom of the ball the track flare is moving to the right. Is it still my finger hit that causes the track to do this, or is my hand rotation too hard?**

The core of the bowling ball, coupled with the revolutions and rotation one applies, determines where the track is. You can take three different balls with different cores and drillings, and your track will be different in each ball.

*Need some help with your game? Bill Spigner welcomes questions from readers. Send them to: Bowling Clinic, Bowling Digest, 990 Grove Street, Evanston, IL 60201 or e-mail [bowl@centurysports.net](mailto:bowl@centurysports.net).*

If you roll a semi-roller and drill a ball with a pancake-shaped weight block over the label, your track will have very little flare, close to the fingers and thumb. Most of today's basic plastic balls have a pancake weight block. These balls are primarily used for making spares—and you want a very stable rolling ball to shoot spares. This type of ball and drilling will show you what your true track is. The pancake weight block is located right under the shell of the ball, and when you drill the holes into this block you are removing the top weight. By doing this, you end up with a ball that has very little imbalance to it. So you get a very true-rolling ball.

You can also do this with a two-piece ball by drilling it axis-weighted, or by drilling a ball with the pin located six inches from your axis. With the axis-drilling, the core is located in a stable position, and the track will not flare and will be close to the finger and thumb holes. If you drill the ball with the pin six inches from your axis, the pin will be in your track, which will produce a track very similar to that of an axis-drilling and a ball drilled over the label with a pancake weight block. These drillings pro-

duce almost no flare and offer a very stable ball roll.

Many of the cores that are built today are not symmetrical in shape, are more than two-piece, and are designed to make the track flare even with stable drillings. According to Brunswick ball designer Ray Edwards, a player with a high track will have the first rotation of the ball off the hand near the holes regardless of the ball. But because the cores are not symmetrical, the balls with the strong cores actually flare in the air.

Players like you, who have a strong release, will have the track flare away from the holes before the ball hits the lane. That's the reason there's a big difference between where your initial track is located in different balls. The core and the action the bowler applies to the ball affect how much that track moves away from the holes. Where the pin is placed will also affect where the track of the ball is in relationship to the holes and the bottom of the ball.

I would not be overly concerned where your track is. You should pay close attention to the reaction you are getting out of your different balls and to learning how the different cores and drilling affect your ball reaction. ●